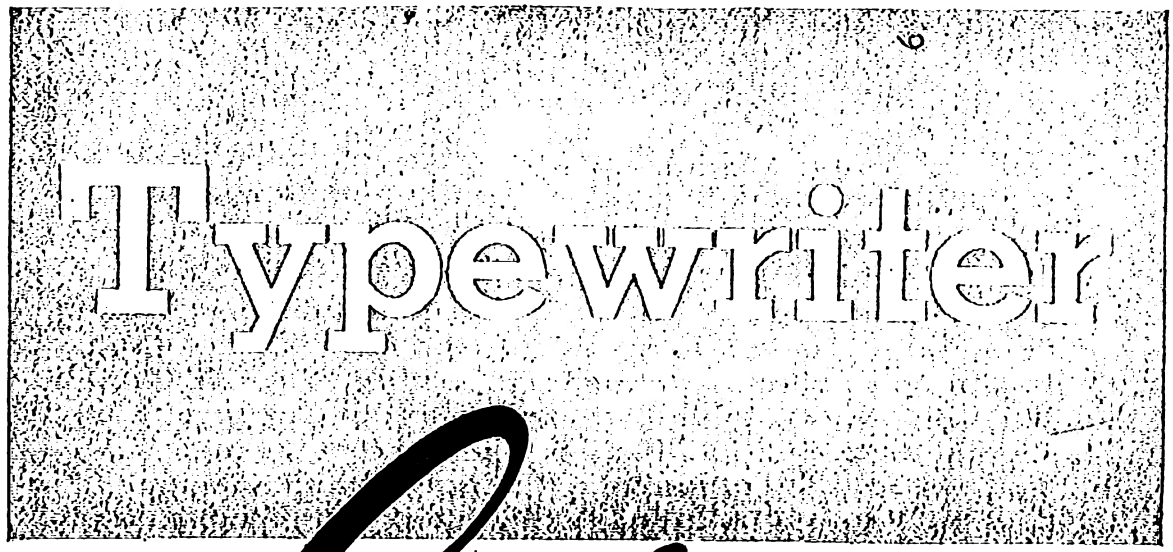
WHAT TO DO • HOW TO DO IT



Care

Prepared by

FEDERAL WORK IMPROVEMENT PROGRAM

UNITED STATES CIVIL SERVICE COMMISSION AND PROCUREMENT DIVISION, U. S. TREASURY DEPARTMENT

EQUIPMENT MAINTENANCE SERIES . BULLETIN No. 1

THIS MANUAL is published to show Government typists how to take care of their typewriters. It is intended to aid in the conservation of equipment and in the improvement of the quality of work wherever typewriters are used in the Government service.

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The manual is the first in an equipment maintenance series. Robert Nirenberg, Civilian Personnel Division, Office of the Secretary of War, War Department, planned the series and coordinated the project as a contribution to the Federal Conservation Program, directed by Maj. F. X. A. Eble, Procurement Division, Treasury Department.

Further help and information on this subject is available to agency officials from the following sources:

The Civil Service Commission, as a part of its Personnel Utilization Program, offers assistance to agencies in solving training problems.

The Bureau of the Budget advises and assists Federal agencies on problems of organization, administrative procedures, and management.

The Procurement Division, Treasury Department, will work with agencies on methods of improving their conservation techniques.

THIS BOOKLET has been prepared for You. It will show you how to keep your typewriter in good working order and thereby eliminate about 90 percent of every-day typewriter service calls. Approximately 40 percent of service calls are caused by erasure dirt, by dust and by neglect; another 40 percent by ribbons that have not been put on properly; and about 10 percent by avoidable accidents.

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Figure 1.—Daily duties in typewriter care.

HOW TO KEEP YOUR TYPEWRITER WORKING

A few minutes a day spent on the five following duties will keep your typewriter in excellent operating condition, capable of turning out work of your highest standard. It is best to perform these duties at the end of the workday, before ink and dirt dry and harden. The five daily duties are:

1. Clean the type.
2. Clean the machine.
3. Clean the work surface.
4. Center the carriage.
5. Cover the machine.

Once a week you should check up on three additional duties. These duties should be performed whenever they are needed, and only when they are needed. It is best, however, to check up on the need for these duties regularly at the end of the week. These check-up or *when-needed* duties are:

1. Clean the platen.
2. Oil the machine.
3. Change the ribbon.

Figure 2.—Brushing the type.

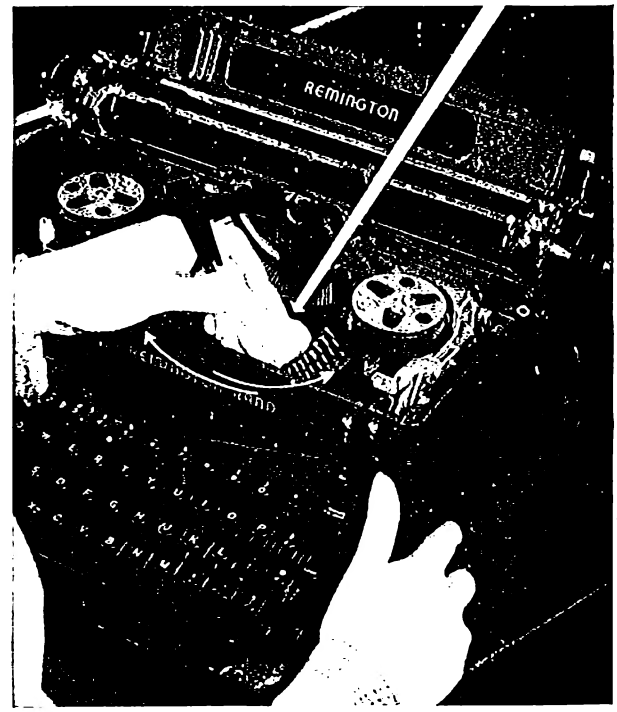


Figure 3.—Wiping the type.

All of these duties will be explained in the next few pages. Most of them are *cleaning* duties. That is because dirt causes far more damage and deterioration of typewriters than wear.

The Daily Duties

At the end of each day do these five things (see fig. 1, p. 4):

1. CLEAN THE TYPE.—Use the short straight bristle brush with a jabbing motion to dislodge and remove the ribbon ink and other dirt (see fig. 2). Finish by wiping the type with a couple of thicknesses of cloth wrapped around the brush. Use a right-to-left motion (see fig. 3).

A special plastic cleaner is available for cleaning type. It is rolled back and forth over the type. It should be kneaded after use so that it will absorb the ink and wax picked up.

2. CLEAN THE MACHINE.—Use the long-handled brush to clean the front, around the keys, the key levers, the type bars and the carriage. Move the carriage to the right and left to get at parts beneath (see fig. 4, p. 6). Next brush the back of the

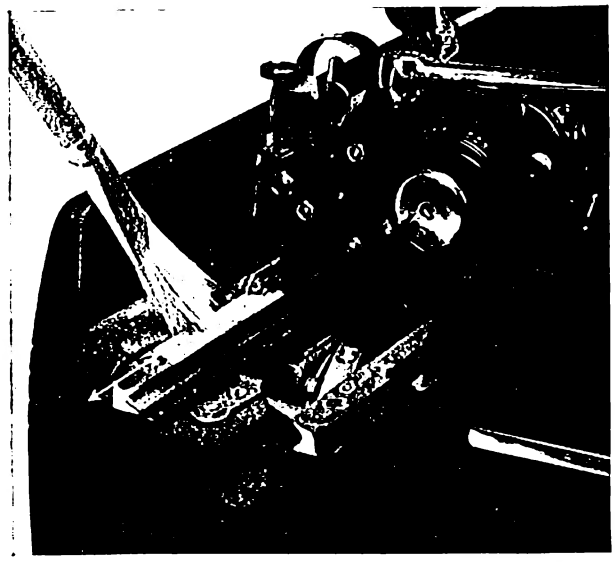


Figure 4.—Brushing the machine.

machine. In cleaning your typewriter, always brush the dirt away from the machine.

3. Clean the Work Surface.—With the typewriter tipped up and held firmly, wipe off the surface of the desk or table (see fig. 5). If your typewriter is fastened down, place a piece of paper under it while cleaning. Then remove the paper with the refuse and wipe around the machine.

4. Center the Carriage.—In preparing to leave the machine, move the carriage to center position. The carriage is then in a safe position to cover and leave. A protruding carriage may catch on the desk in closing, or someone may bump into it in passing, thereby springing the carriage or tumbling the machine off its support.

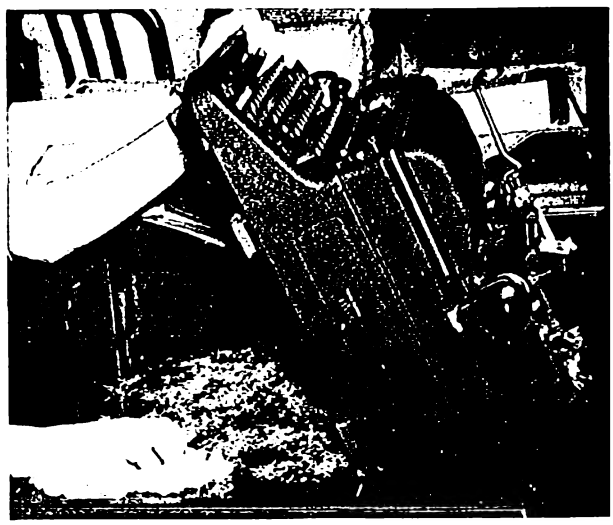


Figure 5.—Wiping under and around the machine.

5. Cover the Machine.—Make it a habit to cover your machine, not only at night but also whenever it is not being used for several hours during the day. Covering the machine helps keep it clean, and also safeguards it from damage resulting from catching on the clothing of passers-by.

The Weekly Check-Up Duties

1. Clean the Platen.—Clean the platen of your typewriter at least once a week. If you cut stencils, you will want to clean it much more frequently, depending on the number of stencils cut. It is a good plan to feed a sheet of blotting paper through the machine after cutting a stencil. This will pick up much of the stencil oil and wax before it has dried on the rubber parts.

Figure 6.—Cleaning the platen.

First dampen a clean, lint-free cloth with alcohol and rub the platen from right to left and back again, turning the platen slowly meanwhile (keep using clean parts of cloth) so as to cover the entire surface. Next, depress the paper release lever, in order to pull away the feed rollers, and rub the platen again with the cloth (see fig. 6).

When the platen is clean, return the paper release lever to normal and feed a piece of mimeograph or other absorbent paper through the typewriter 5 or 6

times to pick up any loose dirt and remaining alcohol.

2. Oil the Machine.—Under some conditions your typewriter might need oiling frequently; under others, rarely. The safe rule is: Oil once a week.

To avoid the application of too much oil (which

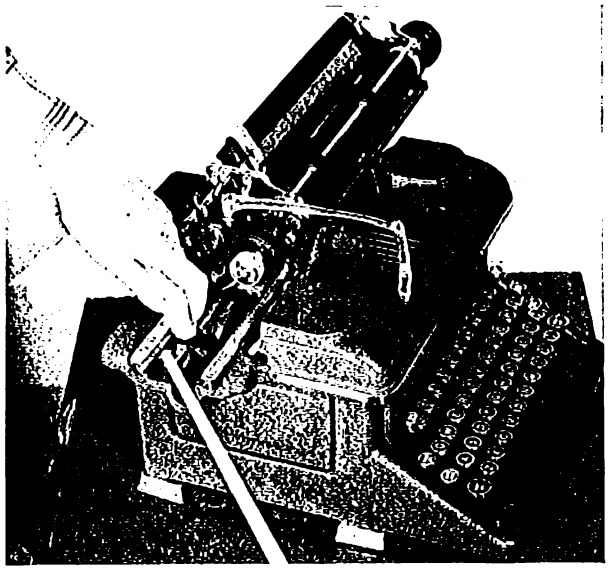


Figure 7.—Fixed carriage rail on standard typewriters.

is worse than none at all), use a cloth *slightly* moistened with oil and wipe the most important friction points, such as the carriage rails and rods back of the paper table. Caution: Never use an oil can to apply oil to a typewriter. It applies too much oil, which gathers dust.

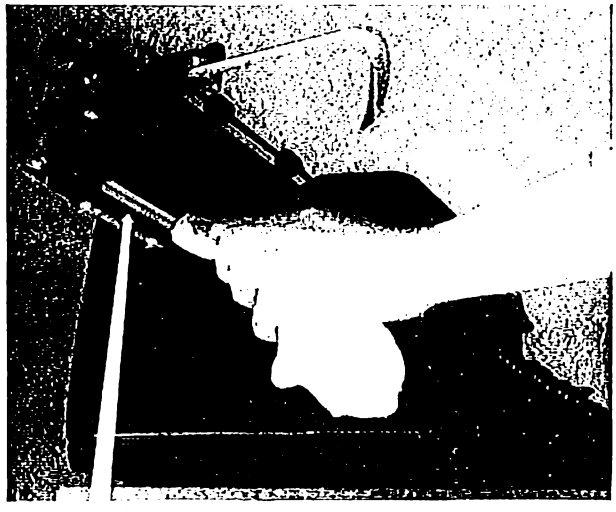


Figure 8.—Movable carriage rail on standard typewriters.

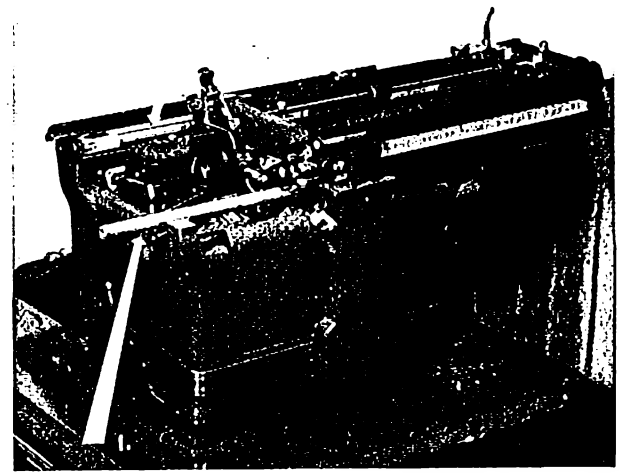


Figure 9.—Underwood: 1. Wayrod; 2. Rear margin bar.

Specific Instructions on Special Parts

Carriage Rails.—Wrap a soft cloth around a pencil or your finger and wipe from left to right the V-shaped grooves or rails on which the carriage moves (see figs. 7 and 8). After the rails have been

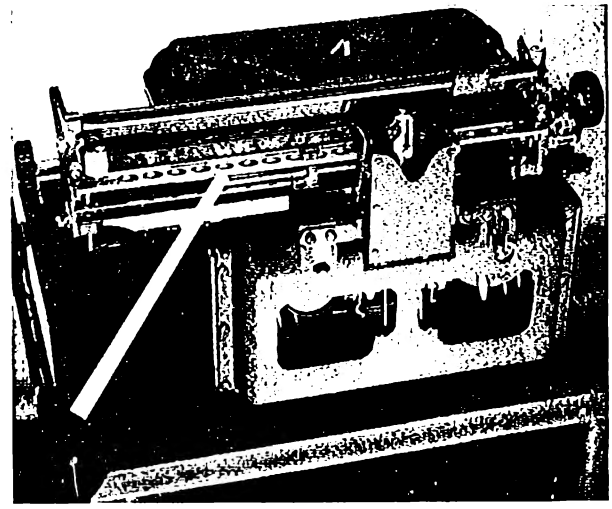


Figure 10.—Carriage rail on noiseless typewriters.

wiped clean, moisten the cloth with oil and wipe them again, moving the carriage from side to side to reach as much of the rail as possible. Wipe off any surplus oil at the ends of the rails.

On the Underwood typewriter, wipe the round carriage rail or wayrod on which the carriage moves (see fig. 9).

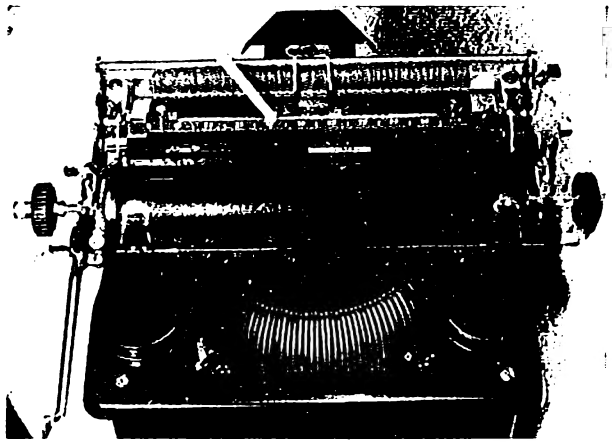


Figure 11.—Margin bar, L. C. Smith.

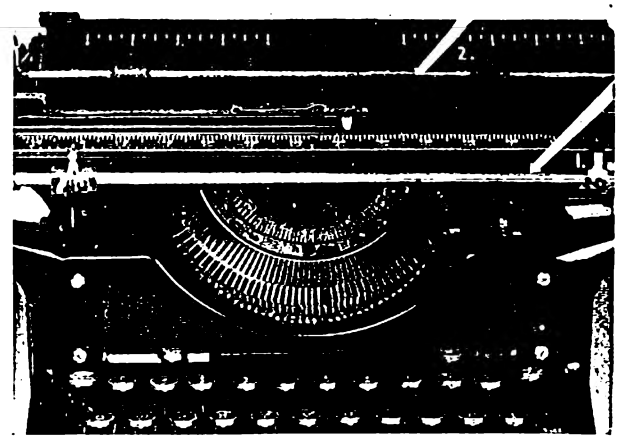


Figure 12.—Underwood: 1. Front margin bar; 2. Paper bail.

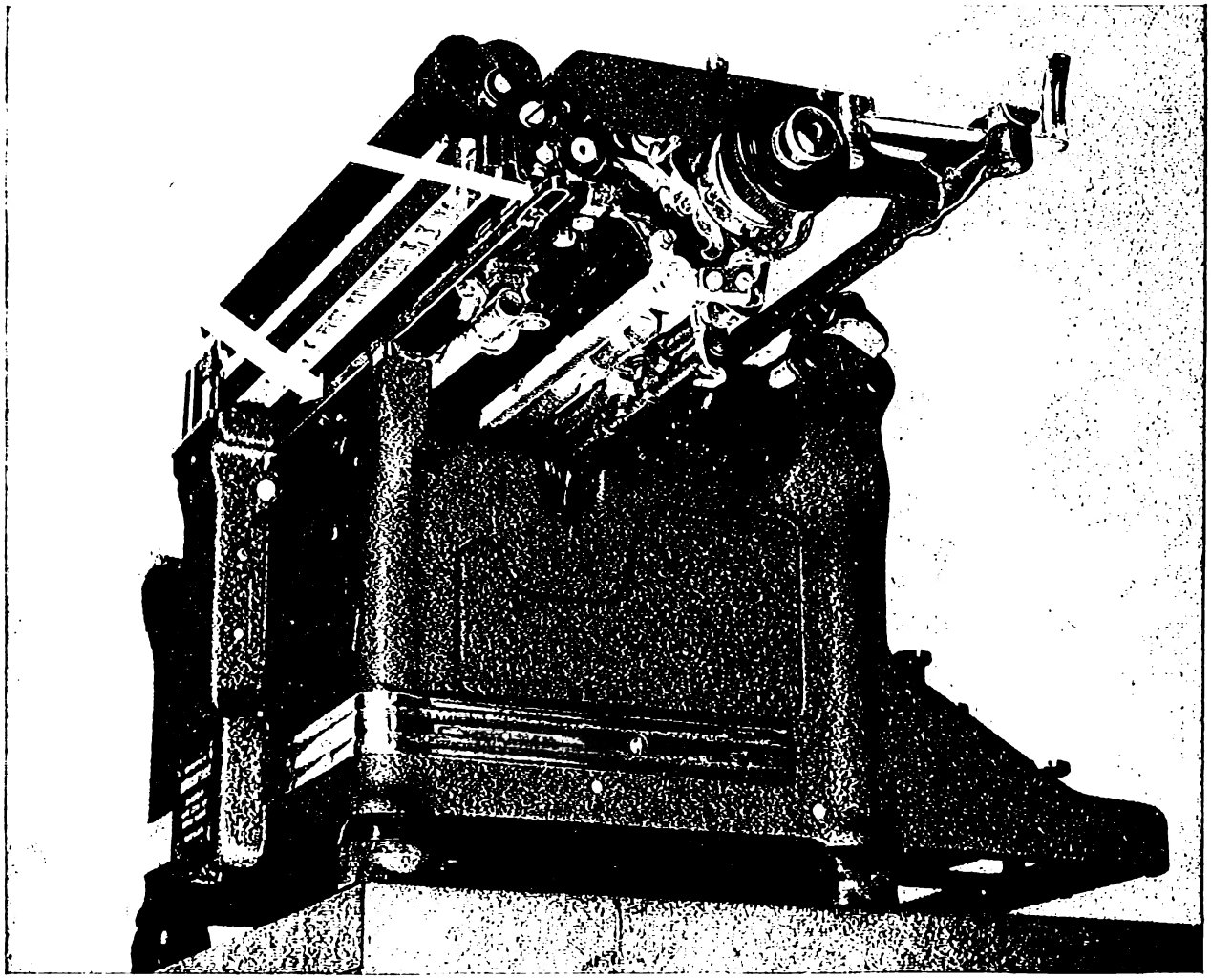


Figure 13.—Tabulator band.

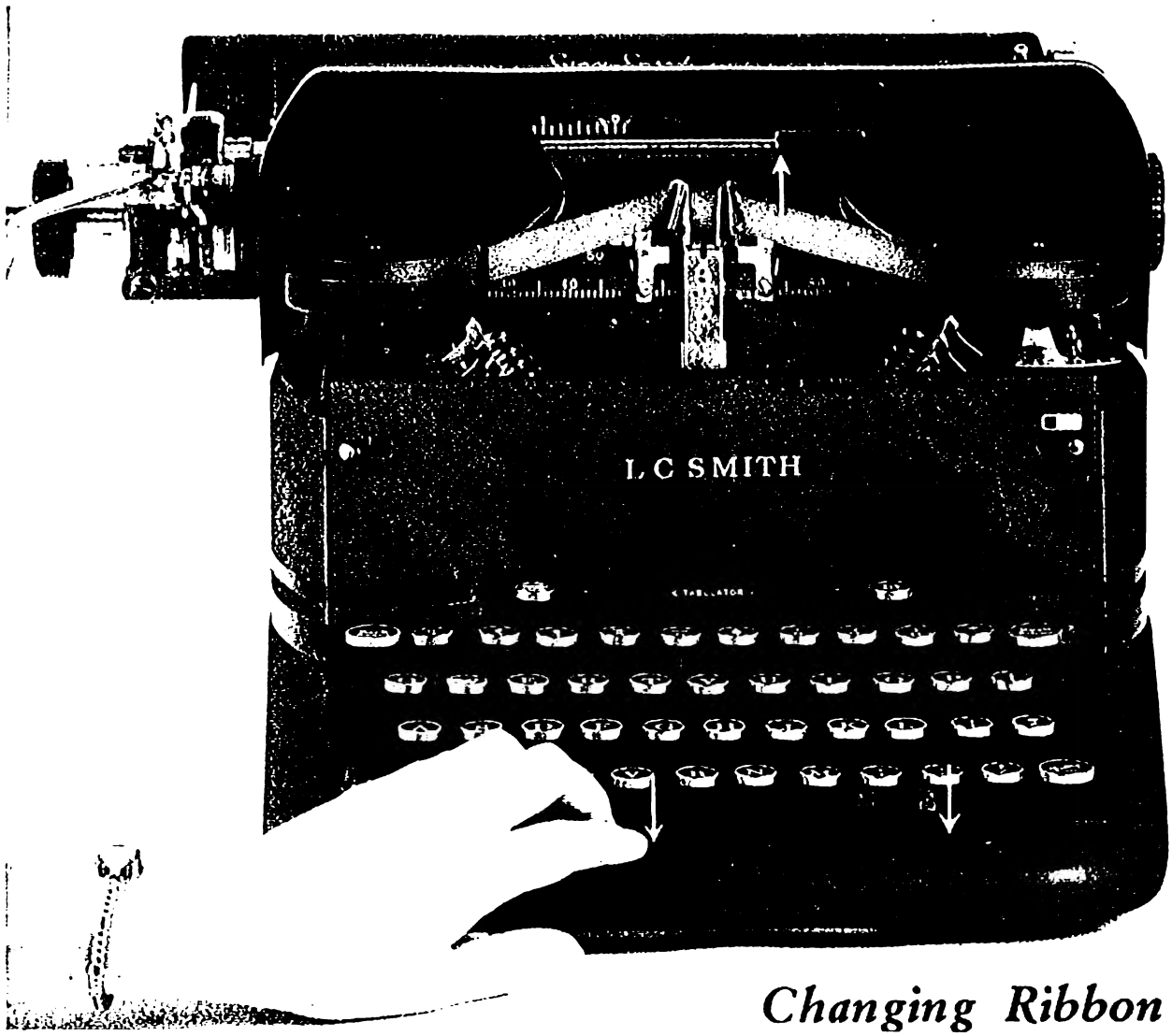


Figure 14.—Holding down space bar on L. C. Smith to raise ribbon for changing.

On the noiseless typewriter, wipe the carriage rail (the bar with the holes) located directly below and in back of the margin stop bar (see fig. 10, p. 7).

Margin Bars.—The margin bar supports the margin stops (see fig. 11, p. 8). Wipe the bar with an oil-moistened cloth, moving the margin stops back and forth on the bar until they slide freely. Wipe off any surplus oil.

Do not oil margin bars on Royal typewriters with the "magic margin" or L. C. Smith typewriters with the "automatic margin." Oil here will accumulate dirt and make the return stop spring sluggish in operation, or ruin the cord on the automatic margin.

Margin stops of the Underwood typewriter are set from the front of the machine. Wipe the round rod in front on which the stops slide (see fig. 12, p. 8). Also wipe the rear margin bar (as much of it as is possible to reach), located in back of and directly below the plate on which the margin scale appears (see fig. 9, p. 7).

Paper Bail.—The paper bail is the rod with two or more rubber rolls holding the paper against the platen (see fig. 12, p. 8). Move bail rolls to extreme right and extreme left and raise the bail to its highest position, then wipe the full length of the bail with the oil-moistened cloth.

Tabulator Brake.—If the carriage moves sluggishly when you press the tabulator bar on the Underwood typewriter, the tabulator brake needs oiling. To oil the tabulator brake, first clear all tabulator stops. Do this in the following way: Move carriage to extreme left; press down tabulator stop clear key; while holding key down, move carriage to extreme right. Wipe both sides of the tabulator band with an oil-moistened cloth. The tabulator band is a flat steel band about ¼ inch wide with a loop at each end; it extends from the left to the right side of the typewriter at the back under the carriage (see fig. 13, p. 8).

3. CHANGE THE RIBBON.—If the typed impressions have become too light for the quality of work desired, it will be necessary to replace the ribbon.

Each make of typewriter has ribbon spools peculiar to that machine. While ribbon spools are not interchangeable, any ribbon may be transferred from one spool to another regardless of the make of machine.[1] To change a typewriter ribbon from a spool which does not fit your machine, fasten the free end of the ribbon to the spool on the left side of the machine. Then thread the ribbon through the ribbon carrier. Using a straightened paper clip as an axle for the spool that does not fit, hold this spool at the right side of the machine at normal

[1] If a ribbon for an Underwood typewriter is to be used on a different machine, cut off ends of ribbon to remove metal eyelets at each end. To use a ribbon without eyelets on an Underwood typewriter, tie a knot about 6 inches from each end to serve in place of eyelets to operate ribbon reverse.

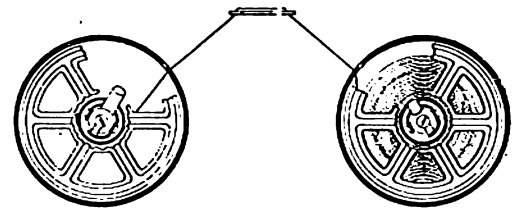
Figure 15.—Center letters depressed to change ribbons on Royal, Woodstock, and Remington standard.

ribbon level so that the ribbon will feed through the ribbon carrier without twisting. Using your index finger of the left hand to turn the left spool, wind the ribbon on to this spool until the right end of the ribbon comes free of the spool on the paper clip. Fasten the right end of the ribbon to the regular spool on the right of the machine.

If your new ribbon is on a fiber spool, transfer it to a metal spool before operating the typewriter. Fiber spools warp and bind. To transfer the ribbon from a fiber to a metal spool, place the fiber spool on the right side of machine as described below, wind the ribbon onto the left spool, remove the fiber spool, attach the ribbon to the metal spool and place it on the machine.

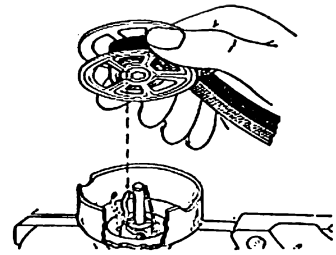
Follow these steps in replacing ribbons on your typewriter:

Lift the ribbon cover, if any; depress the shift lock key to hold the carriage in position as for writing capitals; set the ribbon switch on the "red" indicator.



The ribbon winds on and off the spool from its inner side.

MOUNTING RIBBON SPOOL



The trigger or swinging lever shown in two positions in the spool cup, controls the reverse mechanism. It drops back when the spool is empty and causes it to rewind. It cannot operate if it is between the folds of the ribbon. To mount spool the trigger should stand upright as shown in cut. The trigger should enter the square opening in the spool, between the ribbon and the hub of the spool, as shown by the arrow and dotted line and not between the folds of the ribbon. In replacing the spool press it down until it snaps into position.

Figure 16.—Mounting ribbon spool on Woodstock.

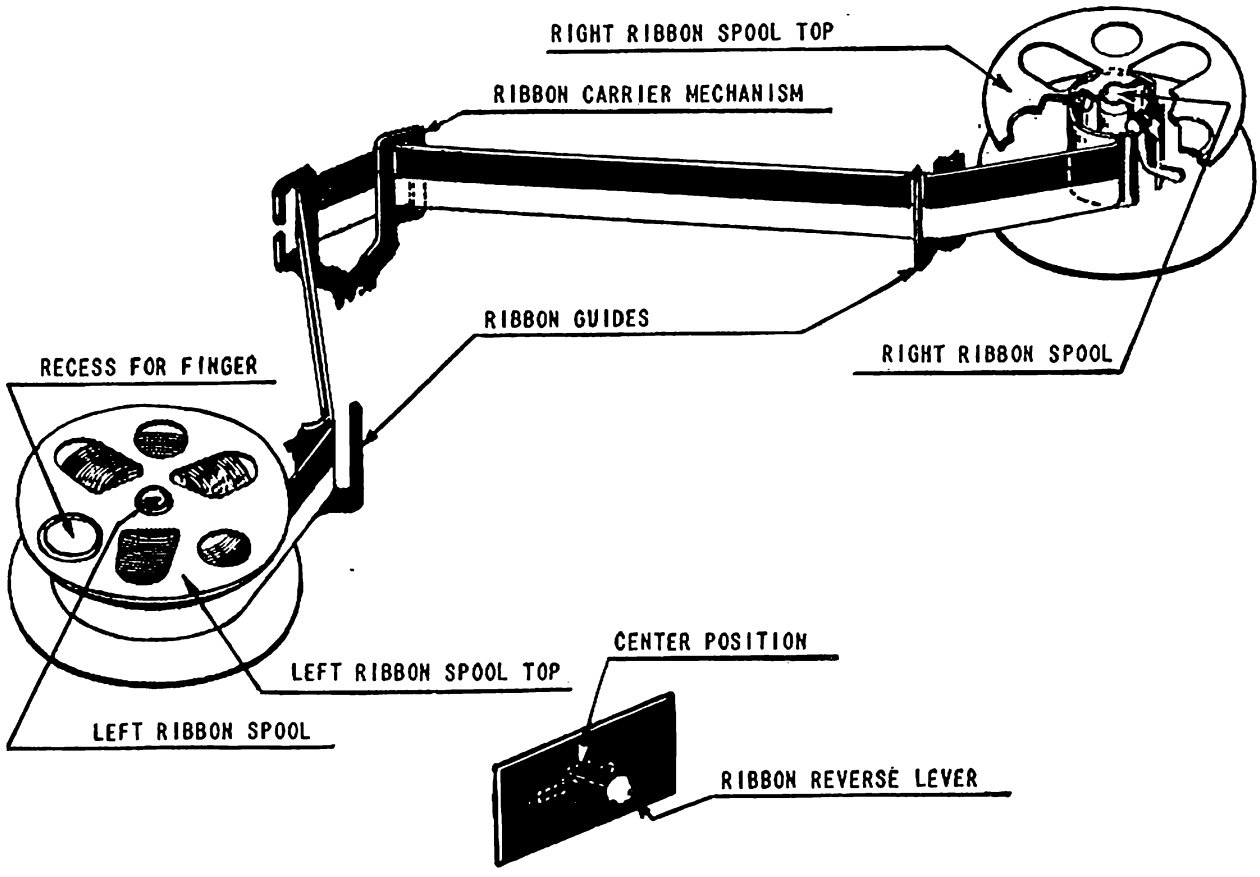


Figure 17.—Diagram of ribbon mechanism, Remington Standard.

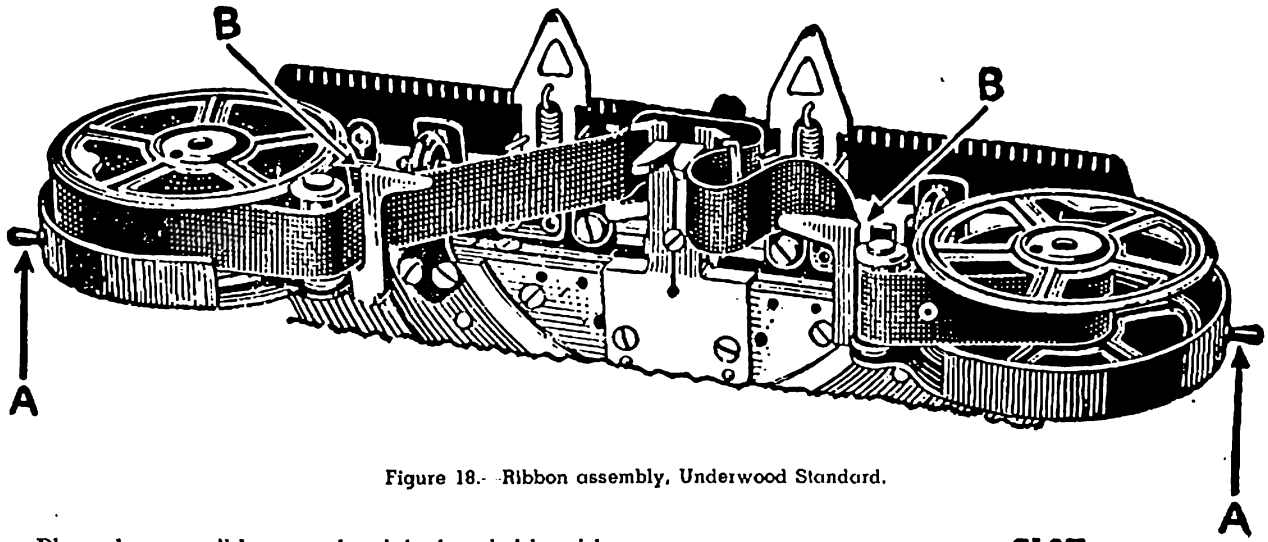


Figure 18.- Ribbon assembly, Underwood Standard.

Place the new ribbon on the right-hand side with the ribbon winding off the front of the spool; secure the loose end of the ribbon on the left spool; wind several inches of ribbon on the left spool. Some ribbons have one surface specially treated for type-striking. Therefore, placing the new spool on the left-hand side would bring the wrong surface of such ribbons into contact with the type.

The next step varies according to make of typewriter:

L. C. Smith.—Hold the space bar down to make the ribbon carrier accessible; thread the ribbon through the carrier (see fig. 14, p. 9).

Royal, Woodstock, and Remington Standard.—Depress the two center letters (H and Y) to bring them to the writing point simultaneously, locking them there to keep the ribbon carrier raised while the ribbon is threaded through (see fig. 15, p. 10). For instructions on mounting the ribbon spool on the *Woodstock,* see fig. 16, p. 11. For a diagram of the ribbon assembly of the *Remington Standard,* see fig. 17, p. 11.

Underwood Standard.—With the new ribbon in the right spool cup, and winding off the front of the spool, pull knob A forward (see fig. 18), place the ribbon in front of the little roller which is directly in front of ribbon-reversing arm B, and insert ribbon through the ribbon-reversing arm slot. Follow the same procedure on left spool. Thread ribbon through carrier.

Underwood Noiseless and Remington Noiseless.—With the new ribbon on the right ribbon spool hub (see fig. 19), place the eyelet of the loose ribbon

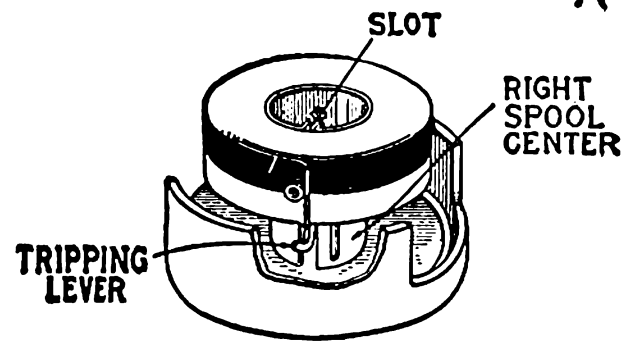


Figure 19.—Right ribbon spool, Underwood and Remington Noiseless.

end on the left ribbon spool hub (see fig. 20). Next, with the second finger of the right hand push in the ribbon vibrator arm and hold it in this position while threading the ribbon through the carrier (see fig. 21, p. 13).

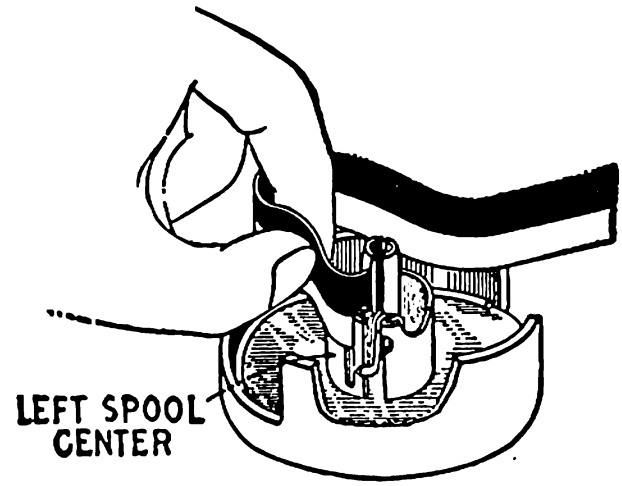


Figure 20.—Left ribbon spool, Underwood and Remington Noiseless.

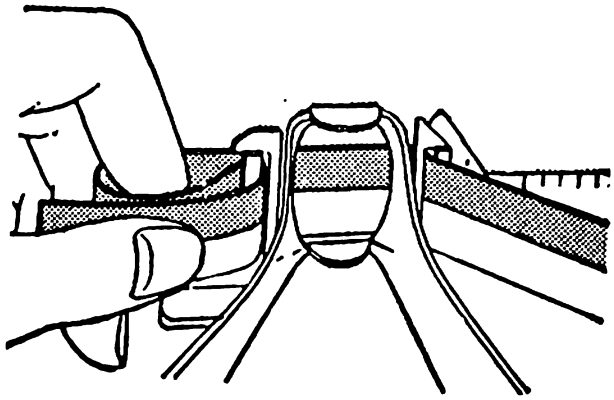


Figure 21.—Ribbon carrier, Underwood and Remington Noiseless.

Caution: On all makes, be sure to return all parts to normal operating position before resuming typing. If this final step in ribbon-changing is omitted, many operating difficulties will result.

Check List of Steps to Take in Changing a Ribbon

1. Wind old ribbon on right-hand spool.
2. Lift off spool covers, if any.
3. Depress shift lock key.
4. Place ribbon indicator at "red."
5. Raise ribbon carrier and observe how ribbon is threaded.
6. Remove old ribbon.
7. Place new spool or ribbon on the right-hand side.
8. Secure loose ribbon end to left-hand spool.
9. Thread the carrier.
10. Cover spools.
11. Place ribbon indicator at "black."
12. Release shift lock.
13. Set parts in normal operating positions.

HOW TO LIFT AND CARRY A TYPEWRITER

There is only one right way to lift and carry a typewriter. First, center the carriage and lock it in position by moving margin stops to center of machine. With the back of the typewriter toward you, place your hands under the bottom frame between the front and rear feet; then lift and carry (see fig. 22).

Of the many wrong ways, figure 23 shows the worst. *Lifting a typewriter by the carriage will spring the carriage mechanism and seriously impair machine action.*

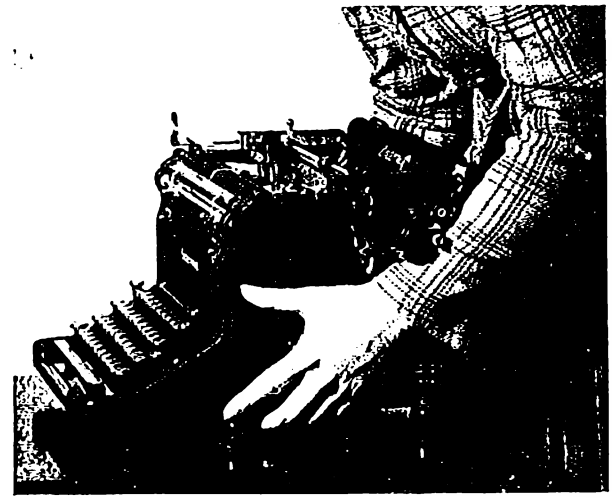


Figure 22.—Proper way to lift and carry a typewriter.

Figures 24 and 25 show two other ways of inviting a visit from the typewriter service man.

To move a typewriter and its stand, place one hand on the typewriter to hold it steady and pull the stand with the other.

Figure 23.—Worst way to lift and carry a typewriter.

FASTENING THE TYPEWRITER TO THE DESK

Fastening is recommended for all typewriters, and especially for long-carriage machines. This type of machine should be fastened securely to the center of a long table or stand (see fig. 26, p. 14). If a table which is too small is used it will be thrown off balance when the long, heavy carriage is moved to either side, and the typewriter would crash to the floor.

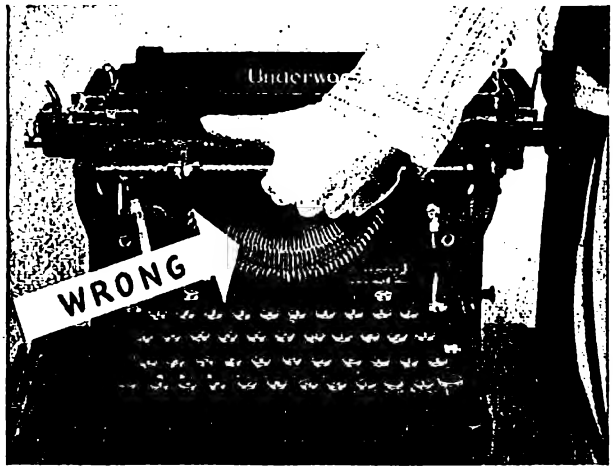


Figure 24.—Wrong way of lifting and carrying a typewriter.

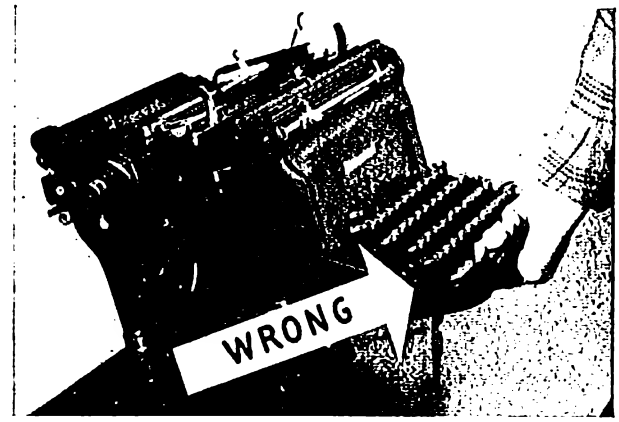


Figure 25.—Another wrong way of lifting and carrying a typewriter.

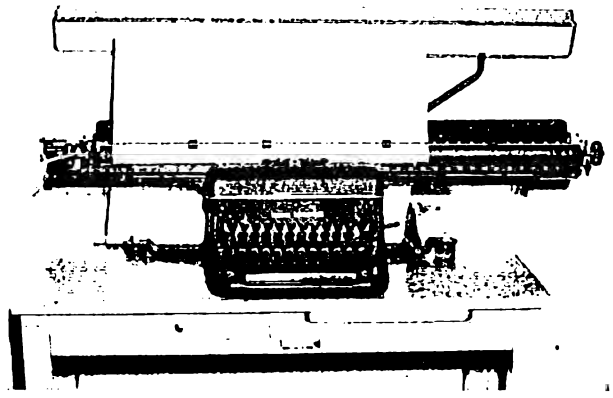


Figure 26.—Long table or stand for long-carriage typewriter.

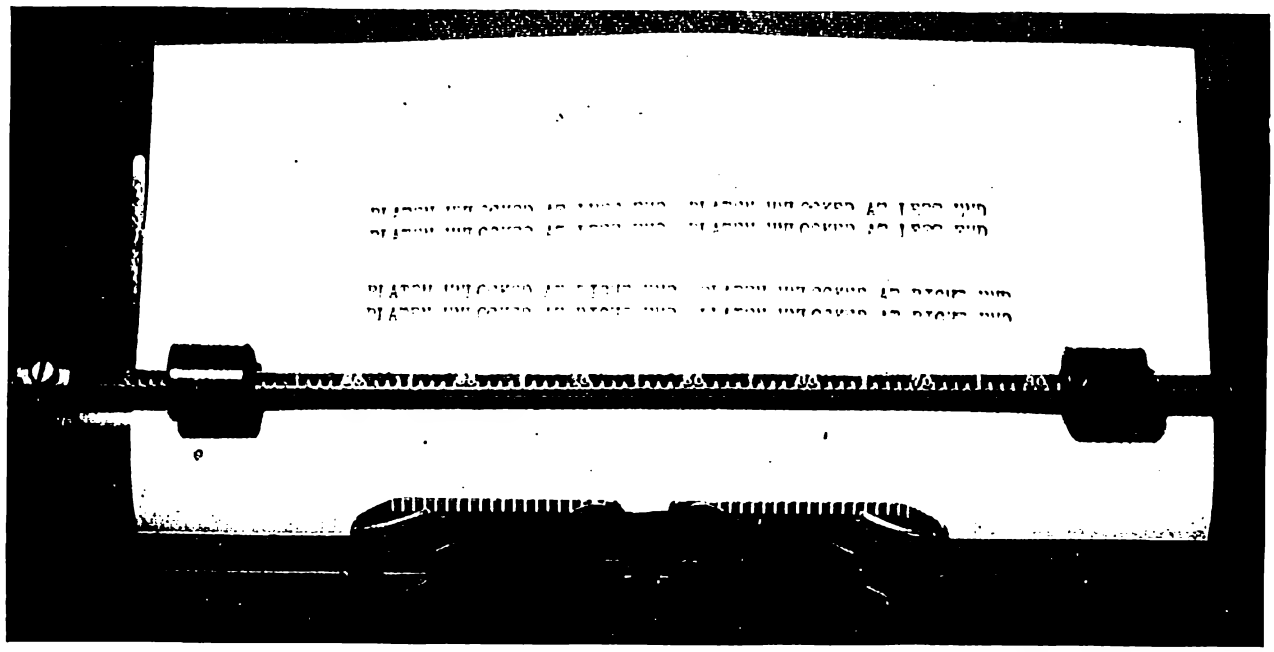


Figure 27.—An unlocked platen makes typing look like this.

Securing the typewriter to your desk or a table will prevent "creeping," which interferes with your speed and accuracy. There is also less risk of accidental damage.

Your typewriter should be placed on a flat, level, solid work surface. A tilted surface slows machine action; a wobbly stand will cause skipping or crowding of letters; an uneven surface may interfere with operation.

All typewriters on desks which have drop compartments must be fastened.

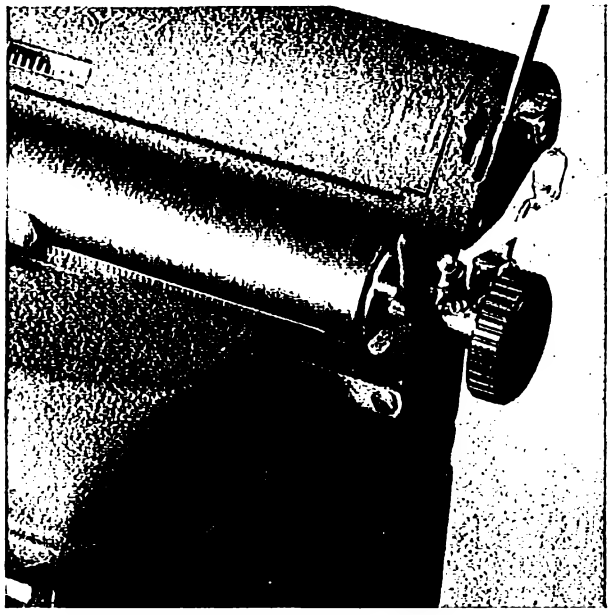


Figure 28.—Platen lock knob on L. C. Smith.

REMOVING THE PLATEN

If your typewriter is an L. C. Smith, an Underwood Noiseless, a Remington Rand, or Remington Noiseless, you can remove the platen in order to brush out the dustpan beneath the platen and to clean the feed rolls and pressure rolls.

On L. C. Smith typewriters with serial numbers above 1,500,000, don't move the line space lever with the platen removed. To do so will cause the line space pawl (the small lever that engages the platen ratchet and turns the platen for line spaces) to fall into a position which will block replacement of the platen. If this happens, lift up the pawl and let it spring back into normal position.

After replacing the platen, be sure to secure the platen locks. If you fail to do this, your typing will resemble that in figure 27.

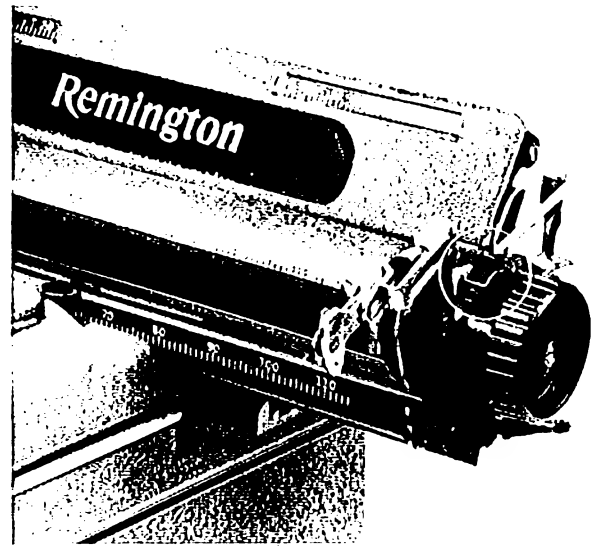


Figure 29.—Platen lock lever, locked, Remington Standard.

Specific instructions for removing and replacing the platen on typewriters of various makes:

L. C. Smith Standard.—Models with serial numbers below 1,700,000 [2] have two slides with small round knobs at the right and left ends of the carriage directly above the platen shaft (see fig. 28). These slides hold the platen in place in the carriage. To

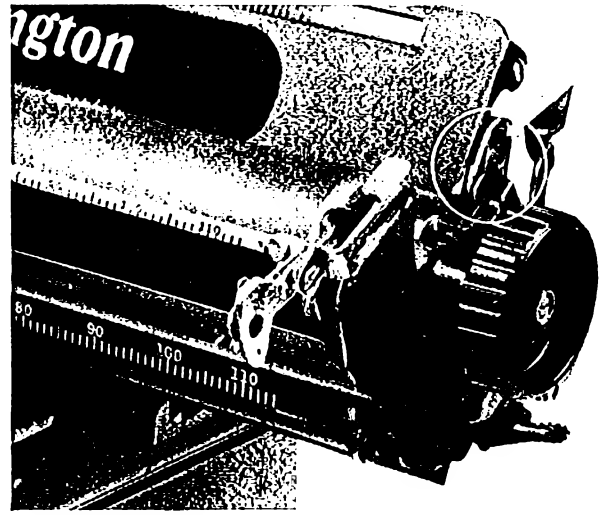


Figure 30.—Platen lock lever, unlocked, Remington Standard.

remove platen: Push the knobs of the platen locks toward the back of the machine. To replace platen: Be sure platen-lock slides are toward the back of the machine, then grasp both platen knobs, holding

[2] Serial numbers can be found by moving carriage to extreme left. The number will be seen on top and to the rear of top plate, near right side.

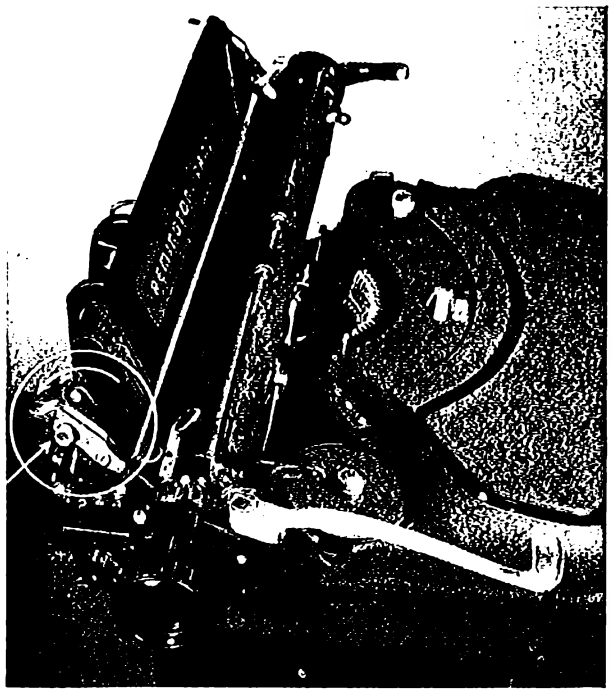


Figure 31.—Platen lock lever, locked, Remington Noiseless.

them so that the platen ratchet is at the left side; insert platen in carriage; and pull the platen-lock levers forward until they lock in place.

Models with serial numbers above 1,700,000 have two chrome levers directly below platen and toward the front of the right and left carriage ends. These levers hold the platen in place. To remove platen from such machines, pull both levers forward at the same time, holding them forward while lifting platen out of carriage. To replace, insert platen in carriage and press down on platen ends until platen snaps in position.

Remington Standard.—At the ends of the carriage, directly above the platen ends, are two locks. To remove platen: Disengage the platen-lock levers (see fig. 29, p. 15) by raising them up and backward (see fig. 30, p. 15). Lift platen out of carriage. To replace platen: With platen-lock levers all the way back, pull the paper bail (the rod with the rubber rolls that hold the paper back against the platen) forward with left hand and place platen in carriage. Pull platen-lock levers forward until they snap in place.

Remington Noiseless and Underwood Noiseless.—At the ends of the carriage are two nickel-plated levers held in place by round spring plungers (see fig. 31). To remove platen: On Remington Noiseless, press plungers in and pull levers forward; on Underwood Noiseless, pull plungers out and levers forward (see fig. 32). Lift out platen. To replace platen: With platen-lock levers forward, grasp platen knobs, with platen ratchet at left side, and place platen in carriage. Push levers back until they snap in place.

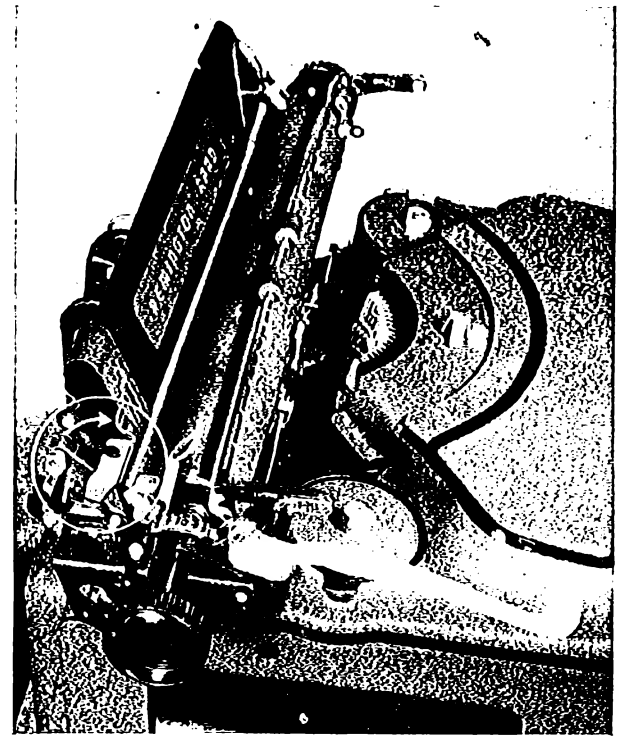


Figure 32.—Platen lock lever, unlocked, Remington Noiseless.

10 HELPFUL CAUTIONS

1. *Always erase with the carriage extended to the right or left* so that the eraser fragments will fall at the side of the typewriter instead of dropping into the type bars (see fig. 33). The amount of dirt this will keep out of your machine will astonish you.

2. *Use liquid type cleaners sparingly, if at all.* Some Federal agencies forbid the use of liquid type cleaner because it spreads and leaves a gummy deposit on sides and heels of type bars, causing type bars to stick in the type bar guide. Liquid type

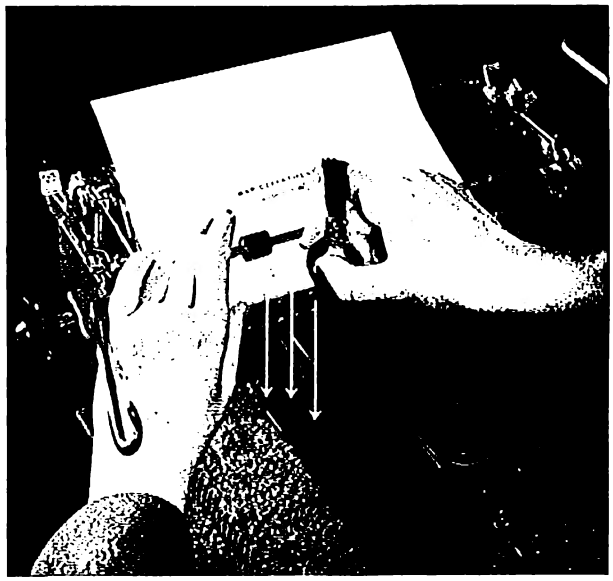


Figure 33.—Erasing on the side, not the middle, of machine.

cleaner, used in excess, carries dissolved dirt down the type bars into the type bar segment slots, slowing up the key action and breaks your typing rhythm. It also swells—and eventually ruins—the type bar pad (on which the bars rest when not in action) (see fig. 34). Shreds from the pad then clog the slots in the segment.

Figure 34.—One consequence of use of liquid type cleaner.

Figure 35.—Closing desk with typewriter carriage uncentered may bend platen end or break carriage frame.

3. *Whenever your typewriter is not in use, center the carriage, and cover your machine. Don't forget* to center the carriage if you have a center-drop or pedestal compartment desk (see fig. 35). Otherwise the platen end may be bent (*see illustration 36*) or the carriage frame may be broken when the desk is being closed.

4. *Don't lean on your typewriter keys.* This will bend the type bars and throw them out of alignment.

5. *Don't load the top of your machine with books or other articles.* This weight may bend the carriage, if it is off-center, or damage the ribbon mechanism or spools.

6. *Don't strike your typewriter keys without paper in the machine.* They will dig into the platen, and leave an ink deposit which will smudge the paper.

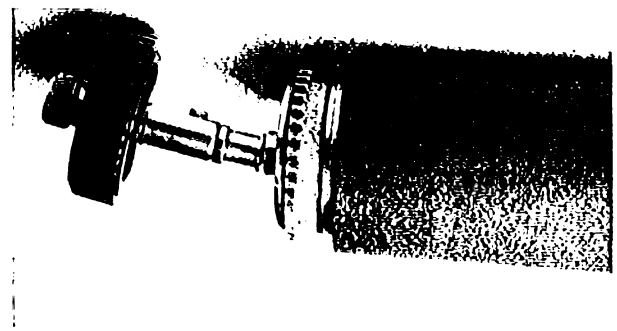


Figure 36.—Bent platen end resulting from closing desk with typewriter carriage uncentered.

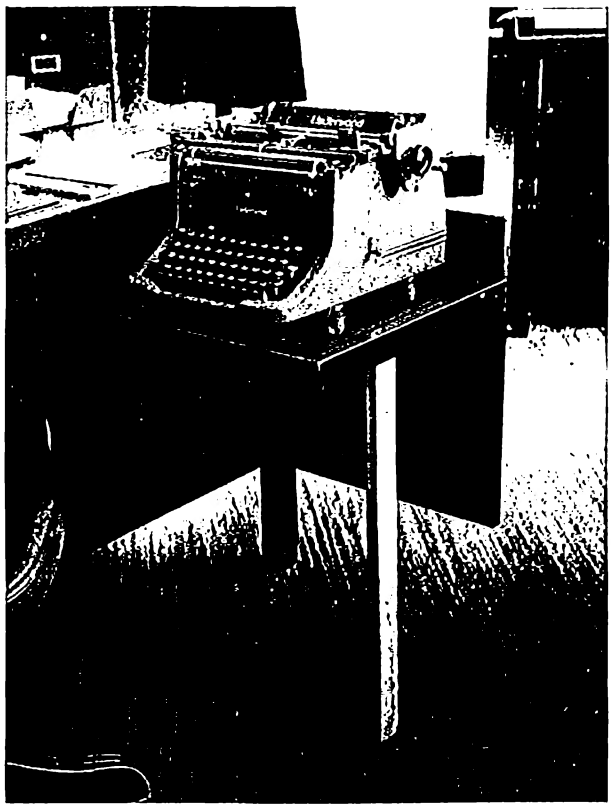


Figure 37.—Brace for unsteady desk platform.

7. *To remove paper from a typewriter, do not pull it out without first releasing the paper release lever and raising the paper bail.* Yanking the paper out will rub paper sizing into the platen. This makes the platen and feed rolls slippery so that they will not grip paper firmly.

8. *Keep your typewriter away from radiators or stoves, and from direct sunlight.* Heat hardens the platen and dries out ribbons.

9. *Keep your desk platform steady.* If it becomes wobbly, wedge it firmly in place. On a pedestal desk the platform may be propped up with a 1- by 2-inch wooden brace about 25 inches long (see fig. 37). On a center drop desk place a wedge between platform and desk at one side. A door stop, pencil or folded paper or cardboard may be used as a wedge.

10. *Report all other needed adustments and repairs for attention by a typewriter service man.*

TYPEWRITER CARE CHECK LIST

Minutes spent on the simple daily and weekly check-up duties will keep your typewriter working smoothly and will help you turn out clean, clear-cut copy. Keep your tools for performing these duties readily accessible at all times (see fig. 38, p. 19).

The following check list is intended to serve as a reminder which you can refer to regularly until the duties become a part of your routine.

Daily Duties

1. Clean the type (see p. 5).
2. Clean the machine (see p. 5).
3. Clean the work surface (see p. 6).
4. Center the carriage (see p. 6).
5. Cover the machine (see p. 6).

Weekly Check-Up Duties

1. Clean the platen (see p. 6).
2. Oil the machine (see p. 7).
3. Change the ribbon (see p. 10).

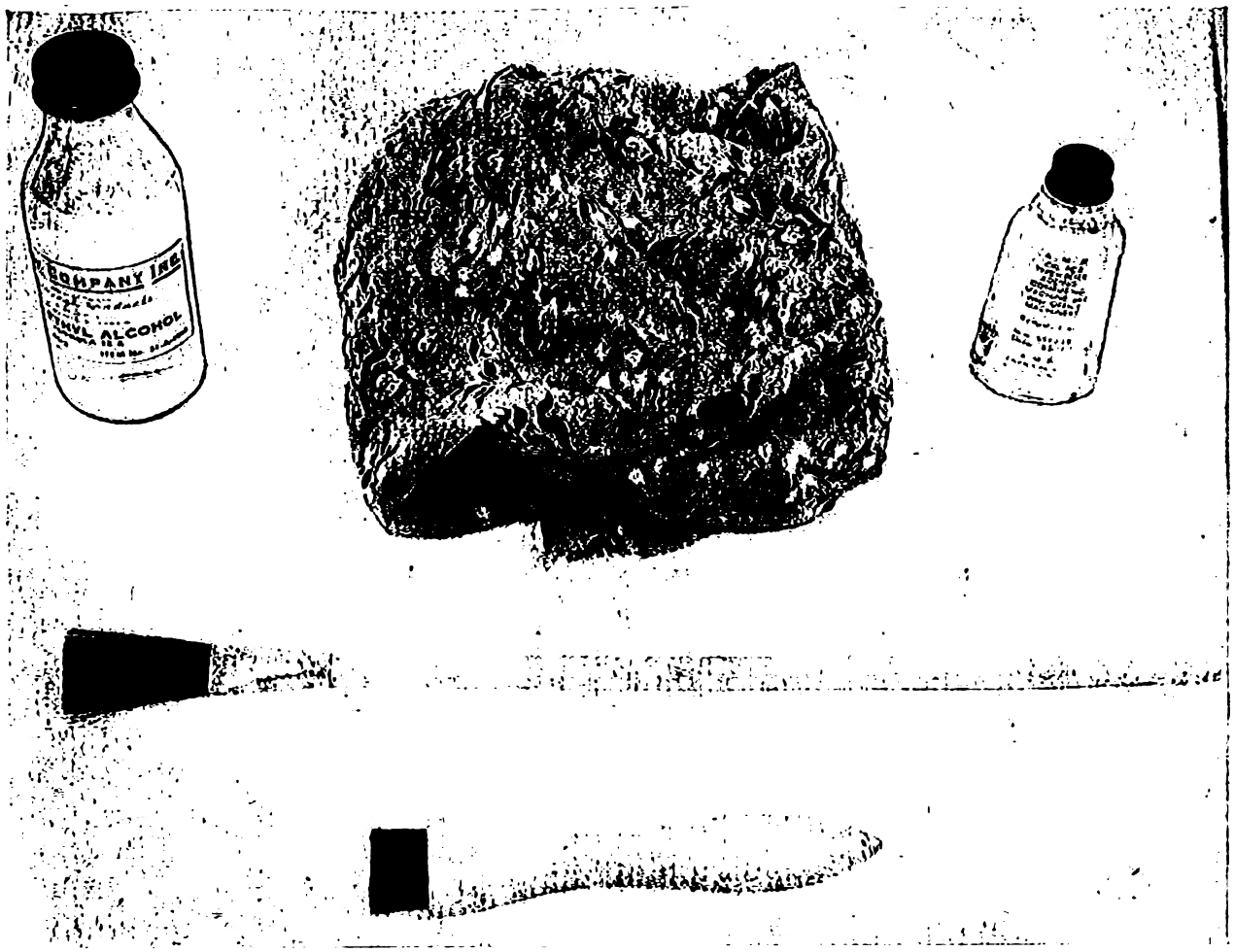


Figure 38.—Typewriter care equipment. Alcohol, lint-free cloth, typewriter oil, long-handled brush, and type brush.

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